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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,187	02/24/2004	Masaaki Sudo	249298US2S	1104
22850 7590 11/27/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MEHTA, PARIKHA SOLANKI	
			ART UNIT 3737	PAPER NUMBER
			NOTIFICATION DATE 11/27/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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## Office Action Summary

Application No.

10/784,187

Applicant(s)

SUDO ET AL.

Examiner

Parikha S. Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments and Amendments*

1. Applicant's arguments regarding the Information Disclosure statement (Remarks, pl. 9 paragraph 2) are insufficient to place both statements in condition for full consideration.

Regarding the IDS of 20 July 2004, the European Search Report does not constitute a proper statement of relevancy of the cited references. Merely listing a reference as being relevant, or providing a statement from another entity in which the reference is discussed does not constitute a proper explanation of relevancy as required by 37 CFR 1.98(a)(3). A translation or statement of relevancy of the cited Japanese Application 61-075700 is required to put the IDS in condition for full consideration.

Regarding the IDS of 30 August 2005, the Japanese Office Action submitted by the Applicant also does not constitute a proper statement of relevancy as set forth by 37 CFR 1.98(a)(3). Furthermore, the Japanese Office Action discusses only the method of fabricating Applicant's alleged invention, which is not relevant to the invention currently claimed by the instant application.

2. Applicant's amendments to the drawings are sufficient to overcome the previous drawing objection, which is hereby withdrawn. However, the new submission warrants additional objections, which are discussed in further detail herein.

3. Applicant's arguments regarding the rejection of claims 1-13 in view of Saitoh (US Patent No. 5,402,791) have been fully considered but are not persuasive. While the Examiner appreciates the difference between the reference invention and that which is illustrated in the drawings of the instant application, the current claim recitations remain insufficient to distinguish over Saitoh ('791). Specifically, the definition of the term "corner", as set forth by Merriam Webster, is as follows:

*corner: The point where converging lines, edges or sides meet*

Accordingly, since the point at which the conductive substrate and transducer meet in the Saitoh ('791) apparatus must necessarily consist of material which is conductive, as it would not otherwise be functional, the reference invention can be said to have "a conductive material arranged in a corner portion formed by the piezoelectric transducer and conductive substrate" as claimed.

### *Drawings*

4. The drawings submitted 4 September 2007 are objected to for containing informal, handwritten matter. Applicant is advised to submit a formal, typed version of Fig. 12 in order to overcome this objection. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "an end portion that is closer to the piezoelectric transducer." The term "closer" in claim 1 is a relative term, which renders the claim indefinite. The term "closer" is not sufficiently defined by the claim, and one of ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention.

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8. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner is unable to discern what is meant by the recitation "flat-shaped on the side face of the piezoelectric transducer" as it pertains to the conductive substrate.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Saitoh et al (US Patent No. 5,402,791), previously cited by Applicant, hereinafter Saitoh ('791).

Regarding claims 1-13, Saitoh ('791) discloses an ultrasonic probe comprising a piezoelectric transducer, a conductive substrate arranged oppositely to a side face of the transducer, and a conductive material arranged in a corner portion formed by the transducer and substrate (Figs. 1 & 8). The conductive substrate of Saitoh ('791) has signal and ground (earth) wires as claimed in the instant application (Fig. 8 elements 30. col. 8 line 48 – col. 9 line 6), and it is shown to have one top end which is relatively closer to the transducer than the bottom end, the top end extending beyond a side face of the transducer (Fig. 8). Although Saitoh ('791) fails to explicitly disclose a nonconductive material which insulates the jointed portion of the transducer with the signal wiring from the jointed portion of the transducer with the ground wiring, this element must be inherently present in the reference invention as it would not be operable without such insulating means. The signal or ground wire of the conductive substrate is connected to a first electrode, and the other wire is connected to a second electrode formed on the back side of the transducer (Fig. 8). A face of the conductive substrate of Saitoh ('791) is disposed on a plane equal to a side face of the transducer as claimed in the instant application (Fig. 1). Saitoh ('791) discloses that the conductive material may be a flat layer or a fillet pattern (col. 10 lines 11-45, col. 9 lines 54-62). Saitoh ('791) also includes two conductive substrates, one connected to a ground wire and one connected to a signal wire, both being arranged on opposite faces of the piezoelectric transducer (col. 10 lines 40-45). In this embodiment of Saitoh ('791), the ground wire of Saitoh is connected to a first electrode, and the signal wire is connected to a second electrode (col. 10 lines 40-45).

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Regarding claim 21, the substrate of Saitoh ('791) is shown to have a flat surface at points adjacent to the transducer (Fig. 8).

*Conclusion*

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parikha S. Mehta whose telephone number is 571.272.3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



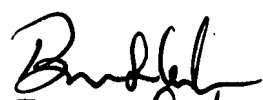
Parikha S. Mehta

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Brian Carter  
SPB 3737